

# Free-to-Premium Conversion: Behavioural Triggers and Timing

Analysis of Upgrade Decision Points Across 3,100 Conversion Events with Predictive Model

## EXECUTIVE SUMMARY

This study analyses 3,100 free-to-premium conversion events on the AIGirlfriends.ai platform between January and September 2025 to identify the highest-signal behavioural predictors of upgrade. Three primary triggers were identified: memory feature exposure, seventh consecutive daily login, and sending a first voice message. A conversion probability model built on these three signals achieves 74% accuracy. Industry-wide free-to-premium conversion averages 15–25%; our platform achieves 42%, attributable in part to emotionally-gated onboarding.

## BACKGROUND: THE 42% CONVERSION ANOMALY

Industry standard free-to-premium conversion for AI companion platforms ranges between 15% and 25%. AIGirlfriends.ai's 42% rate is nearly double the category upper bound. Understanding the mechanisms behind this is commercially valuable and has implications for ethical product design.

Two explanatory hypotheses were tested: (1) self-selection — our free tier attracts more committed users by design; (2) onboarding conversion — specific feature exposures during the free tier create upgrade intent. Data supports both, but onboarding conversion is the dominant mechanism.

## THE THREE PRIMARY CONVERSION TRIGGERS

Logistic regression analysis of 3,100 conversion events identified three behaviours that independently predict upgrade with statistical significance ( $p < 0.001$  in all cases).

- **Memory feature exposure: Users who experienced AI-initiated memory reference (where the AI recalled a previous conversation) converted at 2.3x the baseline rate.** This trigger had the strongest individual effect size.
- **Seventh consecutive daily login: Users who logged in seven days in a row (establishing a habit loop) converted at 1.9x baseline.** The seventh login appears to be a commitment threshold.
- **First voice message sent: Users who sent at least one voice message converted at 1.7x baseline.** Voice creates an intimacy step-change that drives upgrade intent.

When all three triggers are present in a single user session history, conversion probability reaches 81% within the following 14 days.

## TIMING OF CONVERSION EVENTS

The distribution of conversion timing reveals a concentration in the first 30 days of activity, with a secondary cluster around day 60.

- **0–7 days: 18% of all conversions (impulsive, typically voice-motivated)**
- **8–14 days: 24% of all conversions (post-habit loop establishment)**
- **15–30 days: 31% of all conversions (largest single window)**
- **31–60 days: 19% of all conversions**
- **60+ days: 8% of all conversions**

Users who do not convert within 90 days have a conversion probability below 4%. Remarkably, 92% of eventual converters have experienced at least one of the three primary triggers before upgrading.

## THE PREDICTIVE MODEL

A logistic regression model trained on the three primary triggers plus five secondary variables (total sessions, average session length, companion customisation events, evening login pattern, and referral source) achieves 74% accuracy on held-out test data (20% split), with precision of 0.71 and recall of 0.76.

Secondary variables contribute meaningfully but are not individually significant at the  $p < 0.01$  threshold. Evening login pattern is the strongest secondary signal (OR 1.4), consistent with the emotional ritual hypothesis for AI companion use.

The model is currently deployed to personalise upgrade prompts — users with high conversion probability scores receive contextual nudges rather than generic paywalls.

## ETHICAL CONSIDERATIONS

A 42% conversion rate on an emotional product raises ethical questions about whether emotionally-driven upgrades represent informed value judgements or manipulated responses. Internal review produced three

findings:

- **89% of users who upgraded rated the decision as 'definitely worth it' or 'probably worth it' in a 30-day post-upgrade survey**
- **6-month churn rate among emotion-trigger converters is 11%, versus 19% among price-discount converters**
- **Users converted via memory feature exposure show the highest satisfaction scores at 12 months**

The data suggests that emotionally-motivated upgrades produce durable, high-satisfaction subscriptions. Users are not being converted to products they regret. Nonetheless, we maintain a no-dark-patterns standard and publish conversion methodology transparency reports quarterly.

## METHODOLOGY

Analysis of 3,100 conversion events recorded between January 1 and September 30, 2025. Event data sourced from anonymised platform logs. Conversion defined as any free-to-paid upgrade event including monthly, annual, and trial-to-paid conversions. Logistic regression model trained on 80% of events; evaluated on held-out 20% test set. All user identifiers hashed before analysis. Statistical significance threshold  $p < 0.01$ . Confidence intervals at 95%.

---

### Disclosure

AI girlfriends.ai operates AI companion services. This report is published for educational and transparency purposes. All user data is anonymised and collected under informed consent. Not a substitute for professional mental health advice. For academic citation or data-access requests, contact [jack@aigirlfriends.ai](mailto:jack@aigirlfriends.ai).